

BETTER WALLS *for* BETTER HOMES



How STEELTEX Solves
Four Problems of Plaster and Stucco Walls

REINFORCING ... DAMP-PROOFING
INSULATING ... SOUND-DEADENING



LIVING-ROOM IN THE STYLE OF THE EARLY ENGLISH COTTAGE

Frank J. Forster, Architect

Plaster Walls
Should Be Reinforced
To Protect Attractive Interiors.

HERE is a type of modern wall finish adapted from the crude hand plastering of early English cottages. Cracks would not only destroy the beauty of these walls but would result in expensive repair bills.

Modern Home Interiors

NEED THESE FOUR KINDS OF PROTECTION

THERE are four important factors which the home builder should consider if he wishes properly to safeguard the interiors of his new dwelling. These are, in order of their relative importance: plaster cracks; damp-proofing; insulation of walls against the passage of heat or cold; and sound-deadening. Following will be found a brief analysis of each of these problems and a detailed description of a scientifically developed plaster base, *STEELTEX*, which reinforces the plaster and at the same time damp-proofs, insulates and builds quiet, restful rooms. *STEELTEX* brings all these results with one operation, and for a single cost—and a cost no greater than that of any first-class plaster job.

As much as 80% of the visible interior of an average home consists of plaster walls and ceilings. In preserving the attractiveness of interiors how important it is to carefully guard this 80% from blemish—whether the decorative scheme is simple or elaborate! A crack across a plain tinted or papered wall is just as ruinous to the appearance as it is in a wall of hand-finished texture.

In moderate cost homes, as well as those developed on a larger scale, there exists today a definite trend toward the use of wall finishes adapted in a conservative manner from the fine precedents of European and Early American domestic architecture. It has become generally recognized that the interiors of the principal rooms should be carried out in characteristic period styles consistent with the general architecture of the house. If this consistent note is carried on into the furnishing and decoration, the result is pleasing and permanently satisfactory.

It is not surprising that the finishing of interior walls, unquestionably the most important element in the interior decorative scheme, has shown unusual progress during the past few years. Remarkable developments have taken

place in finishing materials and in their use. Plastered, painted and papered walls are showing a broader range of color, texture and designs, all bearing the impress of period influence.

With the passing of the last two decades there has come into American home building a great

renaissance of plaster wall finishes. Even in the living and dining rooms of smaller homes there will be found the studied crudeness of the plastered walls of early England, Tudor and Elizabethan—of Normandy, Italy and Spain. There are, too, the graceful painted panels of the Georgian and French styles and interesting scenic, conventionalized or textured wallpapers, many designs having been reflected from Europe into the contemporary mirror of Early and Late Colonial homes!

Simple or complex as they may be, it is evident that wall finishes have become such an important element in

the interiors of the modern home that it should now be one of the first thoughts of every home builder to take every necessary precaution to protect the structural parts of his home in the beginning, as they cannot be changed without a great deal of additional expense once the structure is completed.

Regardless of the type of interior wall finish which the homebuilder may select for various rooms, there are two unusually important practical considerations which should be carefully studied. These are the *permanency* of the finish and the *structural soundness* of the plaster wall and ceiling. The homebuilder's investment of today, calling for a relatively large outlay of money at first, must be offset by low maintenance costs if it is to be well-balanced. He cannot afford to repaint or repaper constantly or to pay the heavy repair bills resulting from frequent plaster cracks. Nor does he want his attractive interiors spoiled by deterioration, lath marks, cracks and stains.

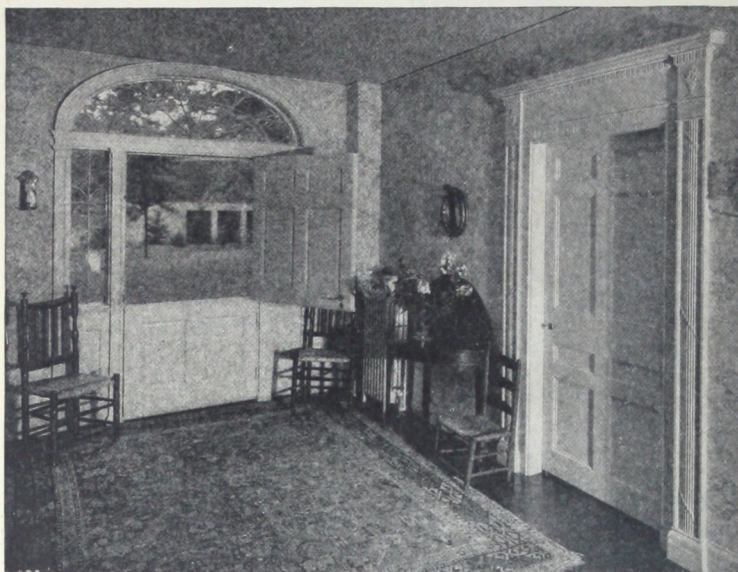
The first of these practical problems, *permanency* of the interior wall finishes, can be partially solved by a careful selection of materials.



Adam and Colonial Interiors Often Have Smooth
Paneled Plaster Walls*

Peabody, Wilson & Brown, Architects

*The illustrations shown on pages 2, 3, 4 and 5 have been selected as excellent examples of good architectural interiors—all other illustrations in this book indicate the use of *STEELTEX*.



This Attractive Interior
Is Colonial in Character,
Employing English and
French Details

Electus D. Litchfield,
Architect

Wallpaper for Such
Rooms Is Often Expen-
sive and Its Appearance
Is Ruined by Cracks

Within the past few years there have appeared a number of special plasters which can be applied readily in all textures and colored integrally or by the use of stains or glazes. These are washable and have a life of many years without redecorating costs. Modern lacquer paints will last half a lifetime. Oil paints, stains, enamels and varnishes have been developed to an amazing degree of permanency and economy. There are, too, specially processed wallpapers and methods of treating papered walls over plaster so that they enter the class of permanent finishes.

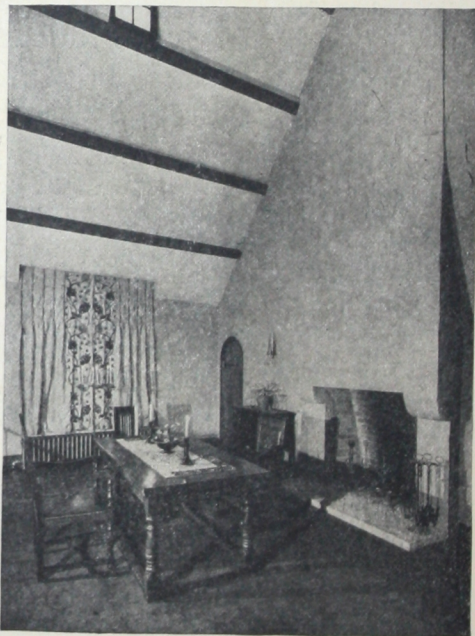
Thus, modern quality materials, by providing new safeguards, greatly reduce the outlay of money formerly needed for redecorating.

Minimizing the Crack Hazard

Plaster cracks are caused primarily by structural strains resulting from uneven settlement of the building or the shrinking and shifting of wooden beams, studs, sills or rafters. As these strains accumulate force, they pass from one to another of the tightly joined structural members and finally exert their distorting force against the rigid planes of the plastered walls. Suddenly the strain becomes unbearable, and, like lightning, cracks will appear in the plaster.

Thus, the menace of "plaster lightning" constantly threatens destruction to attractive interiors and calls for expensive repairs. To meet this problem, the material *STEELTEX* has been developed as a scientific plaster base to reduce the cracking hazard to a minimum. *STEELTEX* is not a "cure-all." It is not a substitute for good foundations nor for strong framework.

It is not a guarantee against damage by settling or faulty construction. But unlike many other materials used as a base for plaster, *STEELTEX*



Norman French and Early English Details with
Heavily Trowelled Plaster Work Are Popular
for Modern Living and Dining Rooms
Warren S. Matthews, Architect

actually carries some of the strains in the plaster wall, thereby reducing cracking. Lath marks are impossible.

This material is described and illustrated on page 6. A network of fabricated steel is wrapped around the room and each plaster plane is so strongly reinforced that *steel* resists the strains, steel actually built into walls and ceilings, rigid steel right where it is most needed—in the heart of the plaster.

Damp-Proofing This is important in all homes, and particularly so where climatic conditions are severe. *STEELTEX* has a heavy two-ply backing. The reverse side of this backing is completely waterproof, and as a final margin of safety, the bond between the two layers is a sealing coat of waterproof compound. When *STEELTEX* is applied, as shown on page 7, it overlaps at all joints and at the intersections of ceilings and walls, so that a double layer of damp-proofing material tight-seals each room, and makes it practically impossible for any dampness to penetrate the walls.

Insulation

The next problem is that of insulating the walls against the penetration of heat or cold. This involves also



Exposed Timbers and Heavy-Textured Plaster
Used in Popular English Style
Arthur W. Coote, Architect



The Use of Tudor Details for Interiors Involves Interesting Arches and Coves in Crude-Finished Plaster Such as Shown Above
Frederick Sterner, Architect

the saving in heating cost which will result if heating losses through the walls are minimized. When *STEELTEX* is used as a base for plaster and stucco, its special double waterproof backing provides valuable insulating qualities.

Sound-Deadening When applied on walls and partitions, *STEELTEX* offers a definite contribution of sound-deadening for two reasons. First, the heavy two-ply backing with its mastic core—when the plaster is applied the backing offers resistance to the passage of sound, cuts down vibrations and helps to deflect and resist sound at the point of origin.

Second, in the continuous blanket of this material on both sides of the studding in the case of partitions between rooms, and on the outside wall studding, which provides confined air spaces.

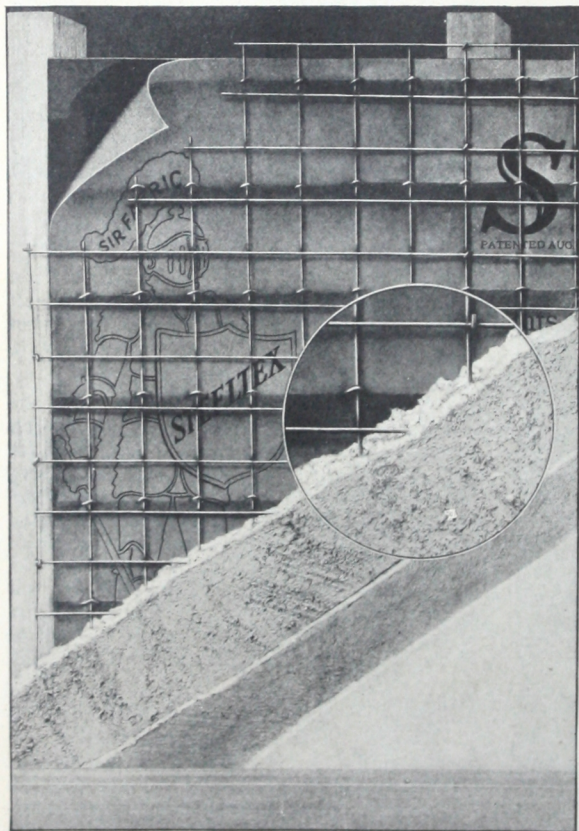
The Cost of The fact is again emphasized that the use of *STEELTEX* offers a modern solution of important wall problems through the use of one material at one cost. *STEELTEX* literally takes the place of lath and of insulating, damp-proofing and sound-deadening materials. No one material ever before gave these combined results. Yet the total cost is little if any more than that of a first-class plaster job over any other base.

STEELTEX the Modern Plaster Base

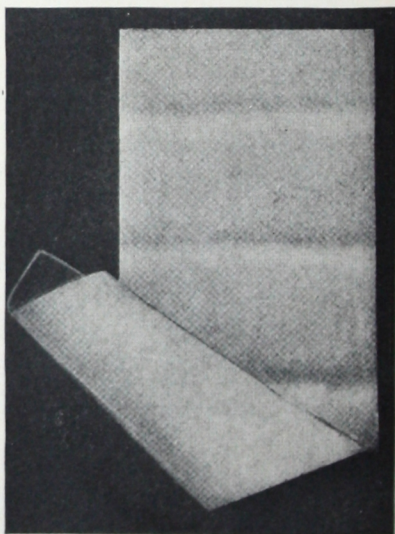
THE illustration below shows in detail the application of plaster over *STEELTEX* and also shows how this material has been designed to solve the four wall problems already outlined in the preceding chapter.

STEELTEX is a modern reinforcing base for plaster, consisting of a 2" x 2" fabric or mesh of cold-drawn, galvanized, welded steel wires, securely fastened to which is an extremely tough and heavy waterproof backing. This material is manufactured in two styles: 1. *STEELTEX* for Interior Plaster, designed especially as plaster reinforcing; and 2. *STEELTEX* for Stucco and Overcoating, the latter being of heavier fabric and backing and with provision for the applica-

tion of a thicker slab than the former, due to the more severe service to which it is subjected when in use. (See page 10.) Illustrations on pages 8 and 9 show exactly how *STEELTEX* is applied to the wooden structural members and how each coat of plaster is put on. This material arrives on the job in compact bundles, each sheet bearing full instructions for application. The material is applied as shown opposite and the plastering is carried out in the usual manner. The second illustration on page 8 shows how the wires are thoroughly embedded through the use of a special furring device and become an integral part of the wall, lending strength throughout every inch of the rigid planes of the plaster.



The illustration at the left shows *STEELTEX* with three coats of plaster. At the upper left corner the heavy waterproof backing has been split to show the layer of plastic waterproofing between plies. At each intersection the reinforcing fabric is welded to insure strength. The magnified view shows how the reinforcing is embedded in each inch of the plaster.



A Small Section of the Waterproof Backing Has Been Forcibly Removed to Show the Smooth Back-Plastered Slab—Note That Reinforcing Steel Is Completely Embedded

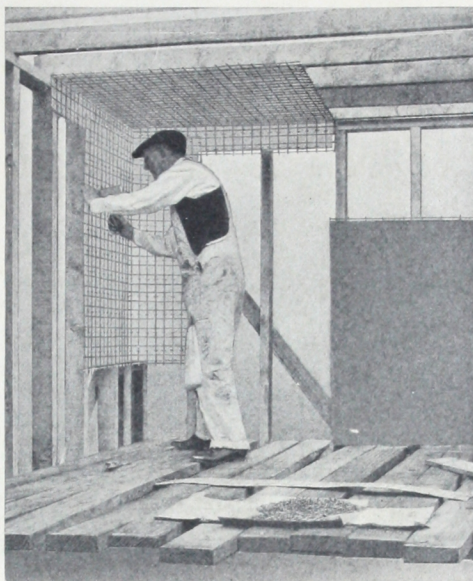
ON PAGES 8 AND 9 WILL BE FOUND PROGRESSIVE VIEWS SHOWING ERECTION OF
STEELTEX AND APPLICATION OF PLASTER
 (SEE PAGE 10 FOR STUCCO WORK)

Why Architects and Craftsmen Commend STEELTEX

BEFORE the invention of this material, plaster was usually applied over lath, requiring "keys" to hold it to the wall. It was pushed through spaces in the base and the extra material hardened to form "keys" which held the plaster in place. But "keys" are always in danger of breaking off—nails driven into the walls, doors slamming, vibrations and shocks to the building, all cause this.

To meet this condition, a method called back-plastering was used in cases where the extra expense was no obstacle. This involved covering the "keys" with an extra coat of plaster on the reverse side of the plaster wall. Thus the two sides were virtually the same. Aside from the extra expense a serious drawback to this method lay in the fact that, obviously, back-plastering could be done only on one side of the wall.

Every inch of a STEELTEX job is *automatically* back-plastered! Instead of "keys" which have no structural value, all of the plaster functions. The plaster spreads out perfectly smooth against the backing. It is a complete monolithic slab on both sides of the reinforcing steel. With this material, back-plastering is *automatic*, accomplished without any extra operations, working only from one side. (See page 6.)



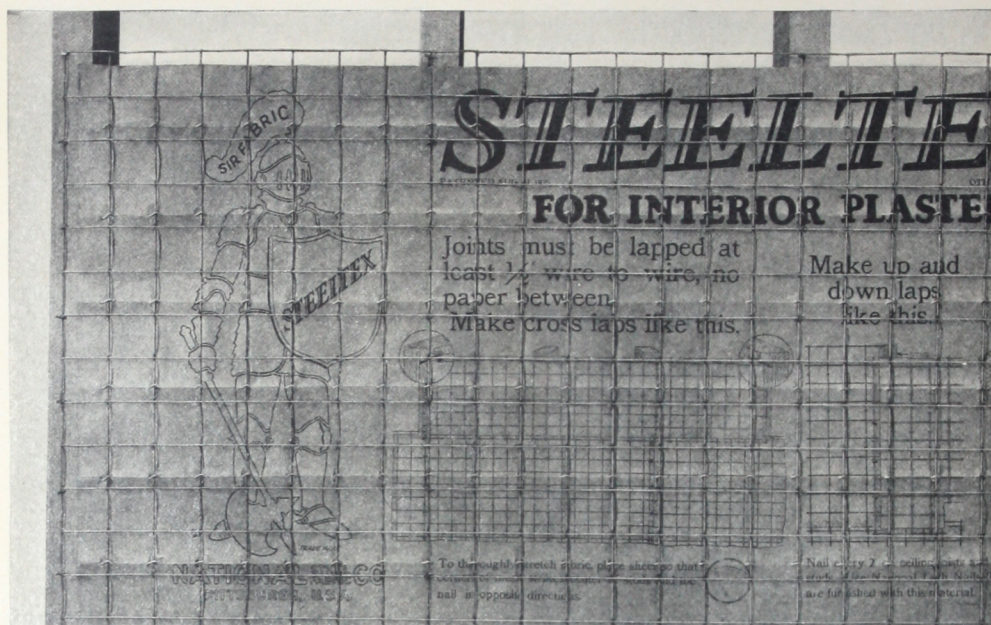
—Then It Is Nailed on Walls and Partitions
Fitting Easily Around Openings



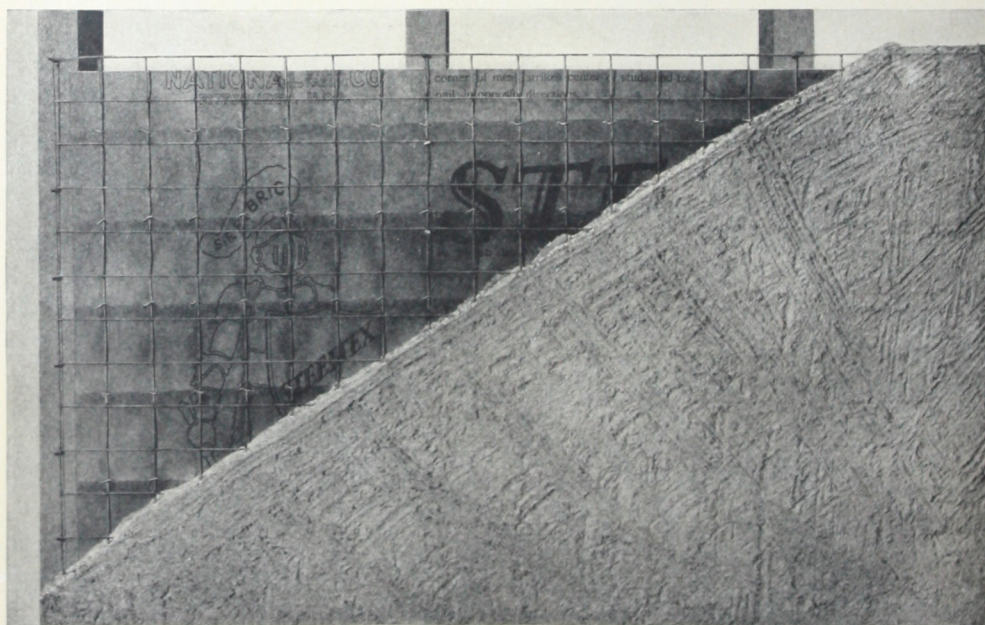
STEELTEX Is Applied First on the Ceilings—
Note Ease of Cutting



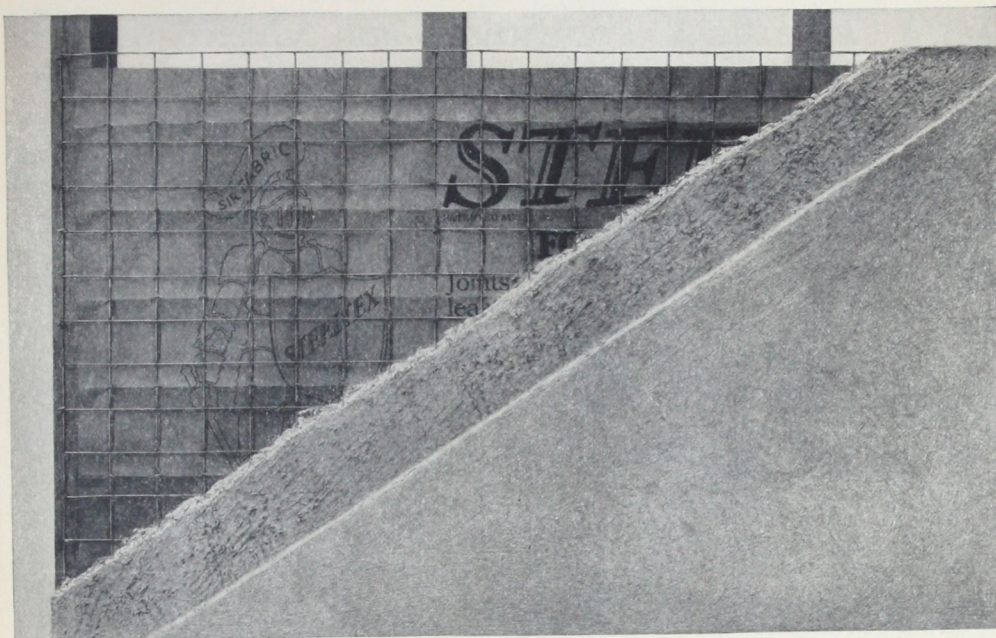
Plastering Proceeds in the Usual Manner—and
the Four Wall Problems Are Solved



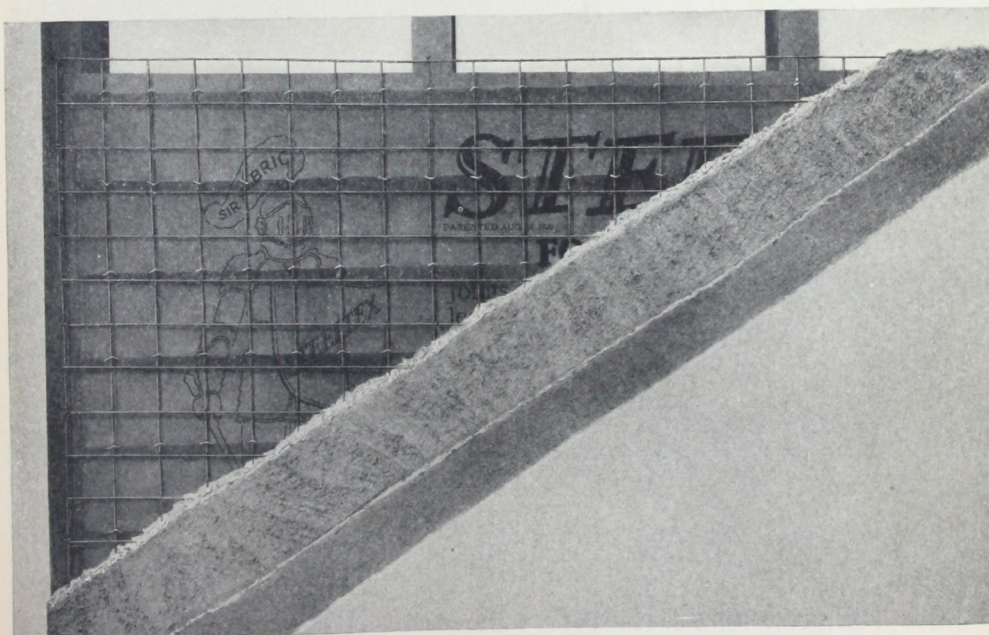
1. STEELTEX IS EASILY APPLIED BY NAILING TO THE STUDS
(The First Stage of a Good Plaster Job—Note Full Directions Printed on Each Sheet)



2. NOTE HOW THE FIRST PLASTER COAT ADHERES AND REINFORCING IS CENTERED
(The Second Stage of a Good Plaster Job)



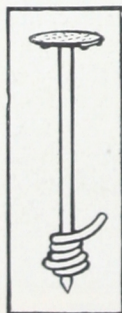
3. THE SECOND PLASTER COAT HAS A FIRM BASE FOR ITS APPLICATION
(The Third Stage of a Good Plaster Job)



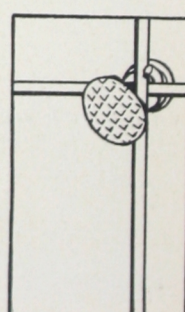
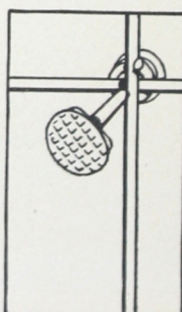
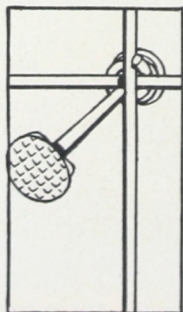
4. THE FINISH COAT GOES ON AND "THE FOUR-WALL PROBLEMS" ARE SOLVED
(The Final Stage of a Good Plaster Job)

STEELTEX For Stucco and Overcoating

(Applied in the Same Way as Shown on Pages 8 and 9)



ACTUAL
SIZE



Application of STEELTEX Furring Nail for Stucco Work (showing "toe-nailing" to stretch the fabric taut)

The Modern Vogue for Stucco

THE popularity of designs for small and large houses in adaptations of early French, Spanish and Italian styles is growing rapidly in every part of this country. These styles almost invariably call for the use of stucco for all or part of the exteriors. The result of this growing interest in stucco construction is a development of textures and colors paralleling that of plaster interiors already described. Within recent years a great many improvements have been introduced for stucco work and this material is now available with colors incorporated directly in the cement or mineral colors are introduced when the color is mixed on the job. The textures of stucco are more carefully studied now than they were a few years ago, with the result that the average stucco home today is extremely attractive in appearance, and this material plays a most important part in the exterior design.

Even as in the case of modern wall finishes, stucco materials and construction have been brought to a point of permanency in *STEELTEX* construction. Reinforced concrete slabs

are actually cast in place, fashioned with man-made stone in accordance with prescribed design.

STEELTEX used as a base for stucco functions exactly as the plaster base already described. When combined with strong foundations, solid framework and other requisites of good building, the use of *STEELTEX* reduces the crack hazard to a minimum. The special *STEELTEX* furring nail holds the steel fabric away from the studding or sheathing, so that all wires are completely embedded in the stucco. The steel reinforcing is established throughout every inch of the rigid stucco wall planes and serves to reinforce against structural strains which ordinarily cause cracking.

Just as in the case with *STEELTEX* for Plaster, *STEELTEX* for Stucco produces a perfect backplastered job, as described on Page 7. There are no keys to break off and weaken the bond between the stucco and the base. Instead, the reinforcing steel is surrounded front and back by a continuous monolithic concrete slab.

Wherever either brick or stone veneer work



R. H. Stoddard, Architect

Oklahoma City, Okla.

STEELTEX Has Been Used Throughout This Attractive Residence as a Reinforcing Base for the Protection of All Plaster and Stucco Work



Winterhaven, Fla.
Ricketts & Haworth,
Architects

STEELTEX for Stucco

Beeville, Texas
J. S. Hall, Builder



is to be used partially or for entire exterior walls of new dwellings or for remodeling, *STEELTEX* finds its logical place. It is used as a base on which cement plaster is applied to form a practical waterproof and weatherproof backing for the brick or stone veneer. Masonry veneer placed directly over *STEELTEX* is a thoroughly satisfactory job. *STEELTEX* plastered with cement takes the place of the wood sheathing, at the same time giving a dense monolithic wall which has insulating and damp-proofing qualities. In fact, wherever there exist the dangers of cracking or penetration of the elements, *STEELTEX* may be introduced as a safeguard to minimize these hazards.

The many advantages in *STEELTEX* reinforced stucco construction have been demonstrated over a period of years in the building of over 110,000 homes, apartments and other types of structures located all over the United States.

Particularly during the Santa Barbara earthquake and the Florida storm was the great strength of this material brought vividly to the attention of builders.

In both cases, where structures of many types were completely demolished, to the strong reinforced, steel-bound buildings in which *STEELTEX* was used, practically no damage was done. And this was before the recent improvements to *STEELTEX* were added, namely, insulation, damp-proofing and sound-deadening—at the time when the material was generally known and used extensively as National Steel Fabric, Style P-214.

The recent epidemic of storms which has caused such heavy damage in various parts of the country has caused even more careful consideration of building materials than has been given heretofore. The resistance of *STEELTEX* to the penetration of the elements is a valuable safeguard.



West Palm Beach
C. J. Travail,
Builder

STEELTEX for Stucco

Sarasota, Fla.
Owen Burns,
Builder



New Exteriors for Old Houses

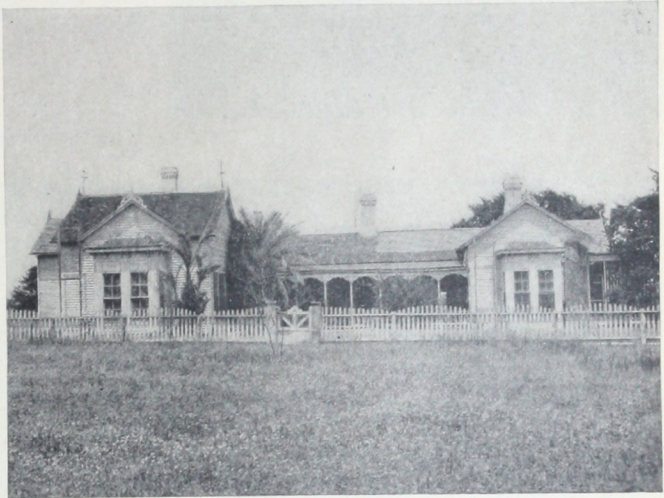
USING STUCCO ON *STEELTEX*

THERE are in the United States today at least 14,000,000 houses which while still structurally good are now in the realm of the "used house." In some cases such houses have depreciated considerably, but the great majority are old primarily because they are out of style and because they are not equipped in a modern manner.

Remodeling is the practical method of rejuvenating the house with a relatively small investment and which can readily transform an old house into a dwelling that is new from every practical viewpoint. The greater part of the structural work has been done already and the investment necessary in remodeling includes such improvements as may be required for the interior of the house, but particularly involves the changing of the exterior appearance.

The most logical way in which to provide a new exterior for an old house is by

the use of stucco overcoating. This flexible material can be applied inexpensively and rapidly and can be used to cover all of the exterior shapes. A few changes here and there in the architecture of the building—perhaps the addition of a porch and some dormers—will almost



Here Was an Old Frame House Which Had Outlived Its Usefulness Until—



—a Resourceful Architect and Builder Used *STEELTEX* for Overcoating to Renew the Exterior

magically turn an ugly old house into one which meets the modern requirements of attractiveness. This idea of overcoating with stucco has been stimulated also by the interesting developments in stucco finishes already described in preceding pages and also by the introduction of *STEELTEX*, which makes stucco overcoating safe and easy. If the old house is of frame construction, as most of them are, *STEELTEX* can be rapidly nailed to position on all surfaces of the house without the necessity of any structural changes, except those called for in the design. Once on the house it provides



This House Had Just Gone Through a Fire, but, Instead of Wrecking It, the Owner Employed a Clever Architect, Who Designed the Remodeled Structure Shown Below. *STEELTEX* for Stucco Was Used Throughout the Job

A. F. N. Everett, Architect

Atlanta, Ga.



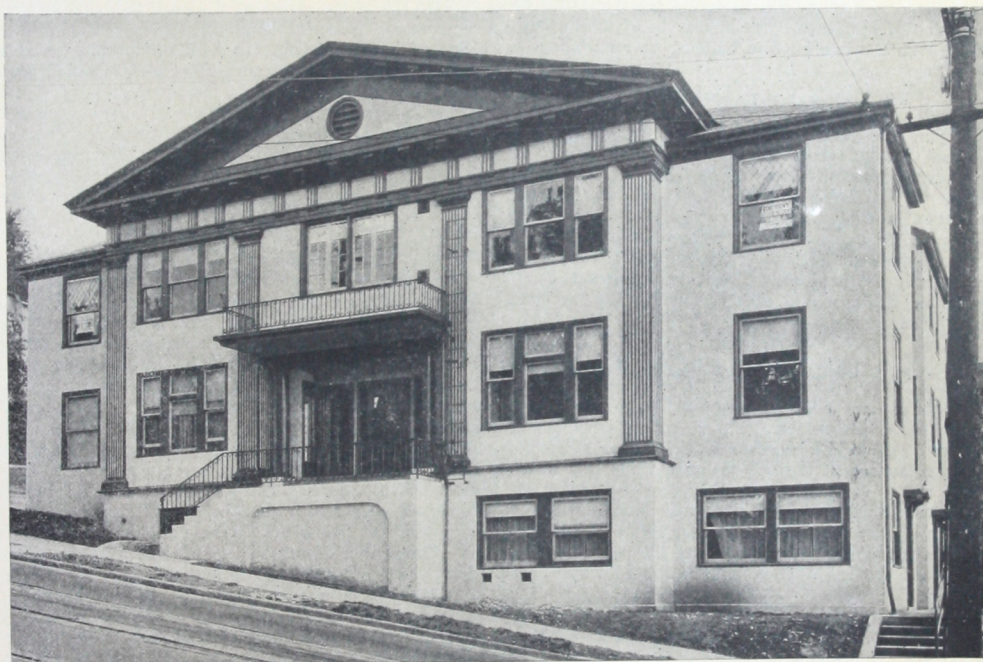
a complete exterior blanket of reinforcing, damp-proofing, insulation and sound deadening. The stucco is applied on this material, as shown on Page 10, and when the work is finished, the house has become a well constructed modern building with an exterior which requires no further attention. It has been estimated that the average investment in remodeling adds to the real estate value of any property approximately three times the amount of money expended. Several illustrations are presented

herewith showing average remodeling jobs with views of the house before and after overcoating.

Hundreds of thousands of yards of *STEELTEX* have been used in the past few years for this purpose, because its application is so easy and the entire cost so economical. Those who remodel houses should be interested primarily in getting stucco jobs which are permanent. By the use of *STEELTEX* for Stucco and Overcoating, there is no reason why such remodeling jobs should not last as long as a new

Here Is an Interesting Example of How Old Frame Structures of Any Type May Be Rejuvenated by the Use of *STEELTEX* for Stucco and Overcoating

This Apartment Building in Seattle Was Completely Overcoated with Stucco by Applying *STEELTEX* Over the Old Siding



structure would. Every virtue of this material as previously described is brought into the structure when *STEELTEX* is used, and there can be no question that it offers both the safest and most efficient medium for remodeling work wherever stucco or plaster is to be applied.

For convenience in erection, *STEELTEX* for Stucco and Overcoating is furnished in two styles, sheets and rolls. The sheets are 50 inches wide by 52 inches long. Forty sheets (80 square yards) are packed in conveniently handled

bundles. The rolls are 50 inches wide by 216 feet long (100 square yards to the roll). The development of the roll material has come about in construction when long sheets to cover straight flat surfaces can be handled conveniently and applied more quickly. *STEELTEX* is cut from the rolls as cloth is cut from a bolt—to fit the space to be covered.

Complete information as to where *STEELTEX* may be obtained for plaster or stucco work will be found on the following page.

Where and How to Get *STEELTEX*

FOR PLASTER OR STUCCO

S*TEELTEX* is sold by thousands of progressive building supply dealers throughout the United States. It can be obtained by asking your architect to specify it or by suggesting its use to your contractor. The manufacturer of this material, the National Steel Fabric Company, maintains offices in a number of principal cities, and warehouses where adequate stocks of *STEELTEX* are maintained. In each of these offices are located men who are constantly carrying to building supply dealers, architects, contractors, plasterers and lathers information as to the correct use of *STEELTEX*. This advisory service reaches homebuilders through these five channels, and for this reason there will be found below detailed description of how each of them may be of assistance to those who are interested in building or remodeling.

Ask Your Architect

If you ask your architect he will undoubtedly tell you that he recognizes the importance of each of the results accomplished by *STEELTEX*. If he knows about *STEELTEX*, and most architects do, you will find that he will substantiate each of the claims which are made in this book. The reason he can do so is because the material has been scientifically designed to meet fully the need for reinforcing, insulation, damp-proofing and sound-deadening, which the architect clearly recognizes.

Consult Your Building Material Dealer

In towns and cities throughout the United States there are progressive building supply dealers who carry *STEELTEX* service to the homebuilders of their communities. This is the man whom the homebuilder may consult without obligation to find out exactly what this material will do and what it will cost for any given job. If you cannot locate a *STEELTEX* dealer in your town, write to the nearest branch office and the information will be immediately forthcoming.

STEELTEX is not a new material but has long been known in the building material field as National Steel Fabric. Millions of yards of this material have been used throughout the country for the purposes indicated in this book. Certain important improvements have been made, after which the name *STEELTEX* was given to the material so that it could be easily

identified by homebuilders and substitution made impossible. Your local building supply dealer who represents *STEELTEX* in your community has been carefully selected because of his standing and his knowledge of the needs of homebuilders. No one is more closely in touch with general building conditions than the progressive building supply dealer, because the very nature of his business brings to him a large volume of current information. You will find that he can help you with any building problem you may encounter.

Talk to Your Contractor

THROUGH the nature of his work the building contractor is constantly experiencing the practical problems of home building. In addition to this, his is a definite responsibility because he is usually called upon to guarantee his work for a period of at least a year after its completion. *STEELTEX* offers insurance for him because in minimizing the danger of dissatisfaction, his own liability is minimized. When he knows *STEELTEX* and its practical merits, he will not hesitate to explain them to you in the light of his direct experience with such structural problems.

Let the Plasterer and Lather Tell You

THE plasterer and lather who in most cases also handles stucco work are very important to any home building project because much of its success depends upon their integrity and skill. On most home building jobs the plastering and stucco work is sublet in a separate contract which includes both material and labor.

Through constant experience, the plasterer and lather know the merits of various types of plaster base. They recognize in *STEELTEX* a material which serves a four-fold purpose for the owner, and also from their own practical points of view, a material which forms an efficient base for the plaster and stucco coats. One great virtue of *STEELTEX* is that it does not require any unusual or new methods in the application of plaster or stucco. The work proceeds in the customary way and the nature of the material is such that in covering the wires, a so-called "skinned" job is impossible. From the viewpoint of the good plasterer, and most of them come within this classification, the use of *STEELTEX* insures a good job, consistent with his reputation.

When You Want *STEELTEX*—

All you need to do is to have your architect or contractor put the following clause in your specifications: "Plaster (or stucco) to be applied over *STEELTEX* manufactured especially for this purpose by the National Steel Fabric Company, Pittsburgh, Pa.—*STEELTEX* to be applied in accordance with the manufacturer's directions printed on each sheet."

A Plaster Job Can Be Only As Good As the Plaster Base On Which It Is Built



A product of the largest manufacturer of welded steel fabric in the world. Its reinforcing products are in use in thousands of homes, buildings, bridges and highways from coast to coast. Authoritative technical information is fully available on every phase of reinforcing for plastic materials.

NATIONAL STEEL FABRIC COMPANY

Union Trust Bldg. **Pittsburgh Steel Co.** Pittsburgh, Pa.

DIVISION OF



BRANCH OFFICES

ATLANTA, Walton Bldg.
CHICAGO, Straus Bldg.
CINCINNATI, Dixie Terminal
CLEVELAND, Hanna Annex
DETROIT, Dime Bank Bldg.
LOS ANGELES, 1736 Naud St.

NEW YORK, 41 East 42nd St.
PHILADELPHIA, Franklin Trust Bldg.
ROCHESTER, Commerce Bldg.
ST. LOUIS, Railway Exchange Bldg.
SAN ANTONIO, Builders Exchange
SAN FRANCISCO, 274 Brannan St.

